

Presque Isle Sewer District

Appendix 2 – Water Quality Data

1. Comment: The boldface entries for TP indicating data from PISD's facility on 8/28 is in error, since they did not provide any TP information on that day.
Response: This data is actually data provided by the intensive survey and should not be boldface. This correction will be made in the final data report.
2. Comment: The PO4-P value of 5.1 ppb for station PIS13 on 8/28/01 is inconsistent with PISD's sampling results (35 ppb) at that location for the same date and also inconsistent with the result obtained in the intensive survey at PIS8 on 8/28/01.
Response: DEP agrees that the 5.1 ppb result for PO4-P is inconsistent with other sampling results for that day. However phosphorus data is often variable, in particular, below a wastewater treatment plant and there is no reason to reject this data. This data point will be relied on less in the modeling effort.

McCain Foods (Woodard and Curran)

Comment: Page 1, para. 4 – McCain flow rate in error, no reference made to whether flows cited for treatment plants are actual flows or licensed flows.

Response: Text will be added in the Introduction section to explain that the flows cited are licensed flows and the McCains flow will be corrected.

Comment: Page 4 – Hydrologic Data – Absence of time-of travel data will make velocity determinations difficult. Include old USGS time of flow study in report.

Response: There is adequate transect data to determine velocity, which can be directly calculated at each transect by dividing flow by cross sectional area. An old time of flow dye study undertaken by DEP will provide additional information. The data report is limited to data collected in 2001. Information pertaining to the dye study could be summarized in the modeling report.

Comment: Page 8, Para. 3 – Diurnal DO also affected by diurnal temperature changes.

Response: This may be true, but the data report was not intended to interpret the data in detail. The statement that diurnal DO changes are primarily due to algae is correct.

Comment: Page 8 – Use of word major to define point sources ambiguous.

Response: The following text will be added to the Introduction section:

“The influence upon downstream water quality from the first two point sources is minor due to their low flow volume. The last four point sources have more flow volume and result in a noticeable difference in downstream water quality. Hence throughout the report, references to major point source discharges includes Presque Isle, McCain Foods, Caribou, and Fort Fairfield.”

Comment: The data report provides no review of ammonia or organic nitrogen. There is not sufficient ammonia to reflect the NBOD estimates in the BOD test. The total nitrogen observed below McCain's are due to nitrate nitrogen.

Response: Once again it should be realized that the data report was not intended to interpret the data in detail. Nutrient assessments were limited to total nitrogen and phosphorus and do not include the various components of total nutrients. Ammonia nitrogen should not be used as a check on available nitrogen for NBOD estimates in the BOD test. TKN, which includes both organic nitrogen and ammonia, should be used, since over a period of 60 days, hydrolysis of organic nitrogen to ammonia should occur. A check of the total oxidizable nitrogen available (TKN) should be multiplied by 4.33 and this product should not exceed the reported NBOD value. All NBOD values passed this check.

The following text will be added to the Nutrients section of the data report:

“The majority of the nitrogen increase observed here is nitrate nitrogen, and hence most of the ammonia nitrogen has already been oxidized within McCain's treatment plant before being discharged to the Aroostook River.”

Comment: Were chlorophyll a values corrected for dead algae cells?

Response: Yes. There wasn't much difference between corrected and uncorrected chlorophyll a.

Comment: Page 20 – Why did the North Branch of Presque Isle Stream have high TSS and TP in both the dry and wet weather sampling.

Response: The intent of the data report is to report the trends and not necessarily interpret that data in detail and find reasons for trends, except in situations with an obvious answer.

Comment: Appendix 2 – DO % saturation value (19.8%) reported for AR5 on 7/3 for the Single Days Surveys table appears to be in error.

Response: Agreed. This will be corrected.

Comment: Appendix 4 Flow Rates – Some flow rates are different from the ones listed on USGS's website.

Response: The flow rates are provisional data subject to change. The flow reported may have been reported last summer on USGS's website. This information will be rechecked and updated and will be flagged as provisional data. The text within the Flow section of the report will also be updated as necessary.